

Health and Wellbeing Scrutiny Committee

Policy Review: Evidence Gathering Session 3

WATER FLUORIDATION

Meeting Objectives: To understand what a fluoridated water scheme is, its health benefits to the population and the legal/procedural processes of such a scheme.

In attendance: Cllrs Dixon (Chair), Davison, Mann and McClennan

Lynne Bennet (Governance Law Specialist – Sunderland City Council), David Landes (Consultant Public Health England), John Morris (University of Birmingham – School of Dentistry) and Alice Wiseman (Director of Public of Health – Gateshead Council).

Apologies: Cllrs Cunningham, Butler, Leadbitter and McDonough

The main points arising from the session were as follows:

- There is an evidence base of 50+ years of fluoridated water in the North East providing examples of the benefits to populations over that period.
- Fluorine is the 13th most abundant element in the earth's crust and exists in trace amounts in virtually all ground waters throughout the world. It is also naturally present in many foodstuffs, especially tea.
- Water fluoridation in the UK uses either Disodium Hexafluorsilicate ($\text{Na}_2(\text{SiF}_6)$) or Hexafluorosilicic Acid ($(\text{H}_3\text{O})_2\text{SiF}_6$).
- Two known harms/unwanted effects from chronic exposure to fluoride are skeletal fluorosis and dental fluorosis. Both can occur irrespective of the source of the fluoride. In terms of dental fluorosis there are only very mild cases reported via the referral centre in Newcastle.
- It is very difficult to ingest enough fluoride to cause acute toxicity, the science around fluoride safety was noted as being robust.
- The upper limit for public and private water supplies in England is 1.5mg per litre of water (1.5mg/l). Interestingly the upper limit for bottled mineral water in England is 5mg/l (due to coming under food regulations rather than water regulations) and a cup of tea also contains approx. 5mg/l.
- By way of comparison toothpaste contains up to 1,500 mg/l or 1,500 ppm.
- There is a strong evidence base for the effectiveness of Community Water Fluoridation (CWF) Scheme including 9 evidence reviews since 2000 also

PHE monitoring reports in 2014 and 2018 show contemporary reductions in decay levels between fluoridated and non-fluoridated communities.

- It was noted that much of the evidence base was around 5 year-olds but it was recognised that CWF benefits all levels of the population. Although the impacts on adolescents and adults was less known due to fewer studies having been conducted.
- There has been a huge shift in the oral health of adults resulting in a decline in the number of adults with complete dentures. However, tooth retention in older people does mean the dental profession are encountering new dental issues in the older generation.
- Numerous evidence reviews since 2000 have reported that there is no evidence of harm to health from fluoridated water. Public Health England reports also show no harm to health. Also in the USA the CDC (Centres for Disease Control and Prevention) have published a new statement (2018) expressing the fact that there is no convincing scientific evidence to any potential adverse effects of CWF schemes.
- It is almost impossible to scientifically prove that something is safe, instead scientists and policy-makers continue to look for evidence of harm, and this is ongoing since 1940's.
- Gateshead has operated a CWF scheme since 1960's and was, acknowledged by the Director of Public Health as, the most cost-effective way to reach the population. Also, in terms of the ethical considerations it provides the best benefit to the most disadvantaged communities.
- A number of extension schemes failed to happen due to a number of re-organisations across Public Health and Primary Care Trusts (NHS) throughout the 1980's-90's. Getting traction on any extension scheme was extremely difficult.
- The legal provisions for the introduction of a CWF scheme are very prescriptive and enshrined in legislation. Water Industry Act 1991 (as amended by the Water Act 2003 and the Health and Social Care Act 2012) and the Water Fluoridation (Proposals and Consultation) (England) Regulations 2013.

The Chair thanked everyone for their attendance and contribution. All the comments would be noted and these would contribute to the final report.